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10/624,779	07/22/2003	Robert W. Jewell	200209507-1	6785

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EXAMINER

MORRISON, THOMAS A

ART UNIT	PAPER NUMBER
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3653

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/624,779

Applicant(s)

JEWELL, ROBERT W.

Examiner

Thomas A. Morrison

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 and 25-29 is/are pending in the application.
- 4a) Of the above claim(s) 17, 18 and 27-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 19-23 and 25-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1-9, 12-16, 19-23 and 25-26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding independent claim 1, there is insufficient structure recited for the media carriers in claim 1, to understand how the print media is moved at a speed based on positions of the media carriers relative to the wall. Also, there does not appear to be means plus function language used in claim 1. As such, it is unclear what structure each of the media carriers has that performs the recited function. The terms "configured to" do not clarify what structure allows the recited function to occur.

Regarding independent claim 12, there is insufficient structure recited for the first and second media carriers, to understand how the sheet of media is steered towards the wall. Also, there does not appear to be means plus function language used in claim 12. As such, it is unclear what structures the first and second media carriers have that performs the recited function.

Regarding independent claim 19, there is insufficient structure recited for the first and second media carriers in claim 19, to understand how the print media is moved towards the registration wall upon concurrently engaging the print media. Also, there does not appear to be means plus function language used in claim 19. As such, it is

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unclear what structures the first and second media carriers have that performs the recited function.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5, 10, 12-13, 19-23 and 25-26 are rejected under 35

U.S.C. 102(b) as being anticipated by Japanese Publication No. 56-113641.

Regarding claim 1, Figs. 1-5 and the attached English translation of the end of column 8 to the beginning of column 9 disclose a media registration mechanism for aligning print media in an image forming device, the mechanism comprising:

a registration wall (6);

a plurality of media carriers (including 5a and 5b) configured parallel to each other and parallel to the registration wall (6), each of the plurality of media carriers (including 5a and 5b) being positioned a different distance from the registration wall (6) and configured to move print media (Fig. 3) in a direction along the registration wall (6); and

each of the plurality of media carriers (including 5a and 5b) being configured to move the print media (Fig. 3) at a speed based on a position of each of the plurality of media carriers (including 5a and 5b) relative to the registration wall (6) to cause the print

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media to rotate towards and align against the registration wall (6). See also English Abstract for an explanation of the different speeds of belts 5a and 5b.

Regarding claim 2, Figs. 1-5 show that the plurality of media carriers (including 5a and 5b) include a plurality of belts (5a and 5b).

Regarding claim 3, Figs. 1-5 show that a first media carrier (5b) of the plurality of media carriers (including 5a and 5b) positioned closer to the registration wall is configured to move the print media at a slower speed (English Abstract) than a second media carrier (5a) of the plurality of media carriers (including 5a and 5b) positioned farther away from the registration wall (6).

Regarding claim 4, Figs. 1-5 show that the plurality of media carriers (including 5a and 5b) includes at least a first belt (5b) and a second belt (5a), the first belt (5b) being positioned between the second belt (5a) and the registration wall (6).

Regarding claim 5, there is some sort of drive means coupled to the plurality of media carriers (including 5a and 5b) for driving the plurality of media carriers (including 5a and 5b) at different speeds. See, e.g., English Abstract.

Regarding claim 10, Figs. 1-5 and the attached English translation of the end of column 8 to the beginning of column 9 disclose a media steering mechanism for positioning a sheet of media (Fig. 3) prior to imaging, the mechanism comprising:

a fence (6);

a plurality of media carriers (including 5a and 5b), each of the media carriers (including 5a and 5b) configured to move the sheet of media (Fig. 3) in a direction substantially parallel to the fence (6), each of the media carriers (including 5a and 5b) being offset a different distance from the fence (6) in one direction; and

a drive mechanism for driving each of the media carriers (including 5a and 5b) at different speeds (English Abstract) where a first media carrier (5b) from the plurality of media carriers (including 5a and 5b) is driven at a speed less than an adjacent media carrier (5a) from the plurality of media carriers (including 5a and 5b) that is positioned a greater distance away from the fence (6) such that the sheet of media (Fig. 3) is steered towards the fence to cause an edge of the sheet of media (Fig. 3) to contact and align against the fence (6).

Regarding claim 12, Figs. 1-5 and the attached English translation of the end of column 8 to the beginning of column 9 disclose an image forming device comprising:

a media registration mechanism including:

a wall (6),

a first media carrier (5b) oriented substantially parallel to and spaced a first distance apart from the wall (5b),

at least one second media carrier (5a) oriented substantially parallel to and spaced a second distance apart from the wall (6),

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the first media carrier (5b) and the at least one second media carrier (5a) being configured to steer a sheet of media (Fig. 3) towards the wall (6) when the first and second media carriers (5b and 5a) are driven at different speeds (English Abstract) causing an edge of the sheet of media (Fig. 3) to contact and align against the wall (6); and

an image forming mechanism (see attached English translation of end of column 8 to beginning of column 9) configured to form an image onto the sheet of media once received from the media registration mechanism.

Regarding claim 13, the media registration mechanism further comprises a drive mechanism coupled to the first and second media carriers (including 5b and 5a) for driving the first media carrier (5b) at a first speed and the second media carrier (5a) at a second speed greater than the first speed of the first media carrier (5b). See, e.g., English Abstract.

Regarding claim 19, Figs. 1-5 and the attached English translation of the end of column 8 to the beginning of column 9 disclose an image forming device having a media registration mechanism for aligning print media along a registration wall, the mechanism comprising:

a first belt (5b) configured to move print media (Fig. 3) in a direction substantially parallel to the registration wall (6);

a second belt (5a), positioned adjacent to the first media carrier (5b), configured to move the print media (Fig. 3) in the direction substantially parallel to the registration wall (6); and

the first and second belts (5b and 5a) configured to cause the print media (Fig. 3) to move towards the registration wall (6) upon concurrently engaging the print media (Fig. 3), until a side of the print media (Fig. 3) contacts and aligns along the registration wall (6).

Regarding claim 20, the English Abstract discloses that the first media carrier (5b) is configured to move the print media (Fig. 3) at a first speed and the second media carrier (5a) is configured to move the print media (Fig. 3) at a second speed different from the first speed.

Regarding claim 21, Figs. 1-5 and the English Abstract disclose that the first media carrier (5b) is positioned between the second media carrier (5a) and the registration wall (6) and wherein the first speed is less than the second speed.

Regarding claim 22, Figs. 1-5 show that the first media carrier (5b), the second media carrier (5a) and the registration wall (6) are substantially parallel to each other.

Regarding claim 23, Figs. 1-5 show that the first media carrier (5b) is positioned between the second media carrier (5a) and the registration wall (6) and being configured to cause a drag in the movement of the print media (Fig. 3) relative to the second media carrier (5a).

Regarding claim 25, there is some sort of drive means for moving the first media carrier (5b) at a first speed and for moving the second media carrier (5a) at a second speed different than the first speed. See, e.g., English Abstract.

Regarding claim 26, Fig. 3 shows at least a third media carrier (7) adjacent to the first and second media carriers (5a and 5b).

3. Claims 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,877,234 (Mandel).

Regarding claim 10, Figs. 1-3 show a media steering mechanism for positioning a sheet of media prior to imaging (column 1, lines 10-13), the mechanism comprising:

a fence (14);

a plurality of media carriers (including 21 and 28), each of the media carriers (including 21 and 28) configured to move the sheet of media (Fig. 3) in a direction substantially parallel to the fence (14), each of the media carriers being offset a different distance from the fence (14) in one direction; and

a drive mechanism (Fig. 2) for driving each of the media carriers (including 21 and 28) at different speeds (column 2, line 60 to column 3, line 12) where a first media carrier (28) from the plurality of media carriers (including 21 and 28) is driven at a speed less than an adjacent media carrier (21) from the plurality of media carriers (including 21 and 28) that is positioned a greater distance away from the fence (14) such that the

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sheet of media is steered towards the fence (14) to cause an edge of the sheet of media to contact and align against the fence (14).

Regarding claim 11, Fig. 2 shows that the drive mechanism comprises a motor (27) and a drive shaft (including 23 and 26) coupled to the motor (27), the drive shaft (including 23 and 26) including different diameter portions (23 and 26) configured to drive the plurality of media carriers (21 and 28) at different speeds.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6, 11 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Publication No. 56-113641 as applied to claims 5, 10 and 13 above, and further in view of U.S. Patent No. 4,717,027 (Laure et al.). Japanese Publication No. 56-113641 discloses first and second media carriers (5b and 5a) that are driven by a drive means at different speeds, to rotatably convey a sheet into alignment with a registration wall (6), but Japanese Publication No. 56-113641 does not show that the drive means for the first and second carriers (5b and 5a) has a drive shaft and belt arrangement as set forth in claims 6, 11 and 14.

The Laure et al. patent shows that it is well known to provide a registration apparatus with a motor (35) that is coupled to a drive shaft (33) via drive transmitting

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means (36), in which the drive shaft (33) includes a first pulley (38) having a first diameter and a second pulley (37) having a second diameter that is greater than the first diameter. Also, a first media carrier (i.e., a first belt 32) is in driving engagement with the first pulley (38) and a second media carrier (i.e., a second belt 31) is in driving engagement with the second pulley (37). See, e.g., Fig. 9. The Laure et al. patent solves the same problem as that of Japanese Publication No. 56-113641, in that the different diameter pulleys on the Laure et al. apparatus cause the different media carriers (i.e., belts 31 and 32) to move at different speeds. See column 6, lines 45-58. This differential speed between the belts 31 and 32 causes articles that are conveyed on the belts 31 and 32 to be rotated into longitudinal alignment. See, e.g., column 7, lines 14-20. As such, it would have been obvious to one of ordinary skill in the art at the time the invention was made, to replace the well known belt conveying structure of Japanese Publication No. 56-113641 with another well known belt conveying arrangement as shown in Laure et al., because this merely involves replacement of one well known belt conveying arrangement with another well known conveying arrangement that is a functional equivalent.

5. Claims 9 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Publication No. 56-113641 as applied to claims 1 and 12 above, and further in view of Japanese Publication No. 61-124459.

Regarding claims 9 and 15, Japanese Publication No. 56-113641 discloses that the first and second media carriers (5b and 5a) are driven at different speeds, but does

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not specifically disclose the first and second media carriers (5b and 5a) are driven by two different motors.

Japanese Publication No. 61-124459 shows that it is well known to provide a media registration device with first and second motors (M1 and M2) that operate first and second media carriers (53 and 54), respectively. These two motors allow the first and second media carriers to operate at different speeds to align a sheet that is conveyed by the first and second media carriers. See Fig. 2 and the English Abstract of Japanese Publication No. 61-124459. It would have been obvious to one of ordinary skill in the art at the time the invention was made, to provide the apparatus of Japanese Publication No. 56-113641 with first and second motors to individually control the first and second media carriers (5b and 5a) of Japanese Publication No. 56-113641, so that such first and second media carriers can properly align a sheet conveyed by the first and second media carriers, as taught by Japanese Publication No. 61-124459.

6. Claims 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Japanese Publication No. 56-113641 as applied to claim 12 above, and further in view of U.S. Patent No. 6,456,311 (Harush et al.). Figs. 1-5 and the attached English translation of the end of column 8 to the beginning of column 9 of Japanese Publication No. 56-113641 discloses all of the features of claim 16, except for the specifics of the image forming mechanism (i.e., a liquid electrophotographic mechanism).

The Harush et al. patent discloses that it is well known in the art to form an image in a printer using a liquid electrophotographic mechanism. See, e.g., Fig. 5 and column 9, lines 39-51. It would have been obvious to one of ordinary skill in the art at the time

the invention was made to provide the printer of Japanese Publication No. 56-113641 with a liquid electrographic mechanism, because the Harush et al. patent discloses that one well known mechanism in the art for forming images in printers is a liquid electrophotographic toner (i.e., a liquid electrophotographic mechanism).

Response to Arguments

7. Regarding the rejection for claims 1, 12 and 19 for insufficient structure, applicant argues that

claims can be recited structurally or functionally (MPEP 2114). The present claims are recited using a combination of both structure and function and thus are valid. Also, there is no requirement that functional language must be associated with a term that is in means-plus-function form. The recited language is not indefinite since the recited functional language defines how the components are configured, which defines to one of ordinary skill in the art how to make the recited apparatus. This is especially true when the claims are read in light of the present specification.

In response, it is the examiner's position that the terms "configured to" do not sufficiently define the structure that performs the recited function in each of the claims 1, 12 and 19. There is insufficient structure recited in claims 1, 12 and 19 to understand how the media is moved, as set forth in claims 1, 12 and 19. More specifically, the examiner cannot understand from the language of claims 1, 12 and 19, what structure allows such recited functions to occur.

Applicant's arguments with respect to the prior art rejections of independent claims 1, 10, 12, 19 and dependent claims 2, 4, 6, 9, 11, 14-16 and 24 have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

8. Claims 7 and 8 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

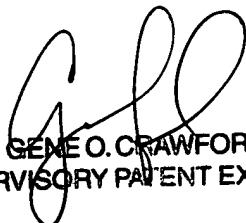
Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas A. Morrison whose telephone number is (571) 272-7221. The examiner can normally be reached on M-F, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gene Crawford can be reached on (571) 272-6911. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

04/26/2006


GENE O. CRAWFORD
SUPERVISORY PATENT EXAMINER